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ENUMERATION AND DESCRIPTION OF THE SEPTORIAS OF NORTH AMERICA.

BY GEORGE MARTIN, M. D.

(Continued from page 82.)

178. SEPTORIA PHLOGIS, Sacc. & Speg. (?)

Spots amphigenous, olivaceous below, dirty white above, 1—3 millim. diam. or, by confluence, larger, with a purplish shaded border (on the green leaves); perithecia rather numerous, epiphyllous, lenticular, 100—120 μ in diameter, dull black; sporules 18—30 x $\frac{1}{2}$—1 μ, faintly nucleolate, nearly straight, hyaline. These characters are taken from specimens on *Phlox divaricata* collected by E. W. Holway in Iowa and probably the same as found in Wisconsin by Trelease on the same host (Parasitic Fungi Wis., p. 19), but the sporules are shorter and narrower than stated by Sacc. Syll. III. p. 533, where the sporules are given as 40—60 x 1—3 μ and the perithecia 150—200 μ.

179. SEPTORIA EUPATORII, Rob. & Desm. On lower leaves of living *Eupatorium serotinum*. Louisiana, March, 1887. Langlois, No. 1097.

Spots numerous, small, round, yellowish at first but soon becoming white, border narrow, raised and generally surrounded with a purplish stain; sporules rather thicker at one end, nearly straight, yellowish-hyaline, nucleolate, 20—25 x 1½ μ.

180. SEPTORIA COCOINA, E. & E. On leaves of *Cocos plumosa*, in a hot house, Columbia, Mo., May, 1887. B. T. Galloway, No. 250.

Spots amphigenous, large (1—2 cm.), white, with a black border; perithecia epiphyllous, scattered, lenticular, 150—200 μ in diameter; sporules clavate-vermicular, continuous, hyaline, mostly subundulate-curved, variable in length from 8—16 μ and 1½—2 μ thick.

181. SEPTORIA CHIMAPHILÆ, E. & E. On leaves of *Chimaphila maculata*. Faulkland, Del., June, 1887. A. Commons, No. 515.

Spots amphigenous, white, with a purple border; perithecia mostly epiphyllous, scattered, sublenticular; sporules acicular, about twenty μ long by less than one μ thick. Whether this is the *Depazea Pyrolæ*, Fr., mentioned by Peck in 23d Rep., p. 64, as found on *Chimaphila umbellata*, we cannot say.

182. SEPTORIA EXPANSA, Niessl. Hedw., 1883, p. 15. On *Geranium Carolinianum*. Manhattan, Kansas, June, 1887 (Kellerman.)

"Hypophyllous, spots indeterminate, much expanded, gilvous or subochraceous; perithecia scattered, rather large, semi-immersed, opening at the apex; cirrhi reddish; sporules filiform, slightly curved, 50—60 x 1 μ, multinucleate and indistinctly septate." The Kansas specimens, which are evidently the same as those distributed by Dr. Winter in his Exsiccati (No. 2897), agree with the above description, except that the sporules are often 75—100 μ long and mostly as much as 1½ μ wide. They generally have about three septa.

183. SEPTORIA ARGOPHYLLA, E. & K. n. s. On living leaves of *Psoralea argophylla*. Manhattan, Kans., June, 1887 (W. T. Swingle.)

Spots amphigenous, minute (one millim.), nearly black at first, becoming dirty white in the center, with a dark, subindefinite border; perithecia mostly epiphyllous, scattered, rather large, immersed; sporules cylindrical, curved, obtuse, hyaline, faintly 2—3-septate, 40—55 x 2½—3 μ. Approaches *Phleospora*.

184. SEPTORIA SILPHII, E. & E. On leaves of *Silphium perfoliatum*. Ames, Iowa, September, 1886. Prof. B. D. Halsted.

Spots amphigenous, 2—5 millim. in diameter, dirty brown above, paler below, subrotund or limited by the veinlets of the leaf, border definite, slightly raised; perithecia sublenticular, mostly epiphyllous; sporules filiform, 35—50 x 1 μ, nearly straight and only faintly nucleolate. The spots become dirty white in the center. Closely allied to *S. Cacaliæ*, E. & K., but spots rather darker and sporules mostly shorter.

185. SEPTORIA LITTOREA, Sacc. Syll. III, p. 512. On living and partly dead leaves of *Apocynum cannabinum*. Manhattan, Ks., June, 1887.

Spots amphigenous, rusty color, with a small, white center, definite, suborbicular, 1—3 millim.; perithecia few (1—3) on a spot, epiphyllous, sublenticular; sporules subcylindrical, curved, nucleolate, nearly hyaline, obtuse at each end, mostly 50—70 x 2 μ, but some of them even 90—100 μ long. This agrees so well with the description given by Saccardo that there can be little doubt of its being his species.

186. SEPTORIA SII, Rob. & Desm. Sacc. Syll. III, p. 530. On leaves of *Cicuta maculata*. Manhattan, Ks., July, 1884. (Kellerman.)

Spots amphigenous, small (one millim.), round or nearly so, yellowish at first, then white, with a pale yellow border; perithecia few (1—3) on a spot, epiphyllous, black, punctiform; sporules filiform, slightly curved, ends rather acute, yellowish-hyaline, nucleolate, 35—40 x 1—1½ μ.

187. SEPTORIA AEGOPODII, Desm. Crypt. Fr., 616. On withered leaves of *Osmorrhiza longistylis*. Racine, Wis., June, 1887. Dr. J. J. Davis.

Spots amphigenous, dirty white above, with an imperfectly-defined dark border, greenish below, small (2—3 millim.); perithecia nearly obsolete, pale, thickly scattered over the spots and visible on both sides, lenticular, 150—200 μ in diameter; sporules cylindrical, granular and

nucleate, becoming 1-septate, 45—75 x 2½—3 μ. This is really a *Phleospora*, on account of the very imperfect perithecia (if they can properly be called perithecia). Really "acervuli" would be more nearly correct, as there are no proper perithecia either in the Wisconsin specimens or in any of the specimens of *S. Aegopodii* in the various European Exsiccati examined.

188. SEPTORIA HELENII, E. & E. On leaves of *Helenium autumnale*. Racine, Wis., June, 1887. Dr. J. J. Davis.

Spots amphigenous, 2—4 millim. in diameter, dark, becoming dirty white, with a dark, slightly raised border; perithecia about 100 μ in diameter, of pale, parenchymatous structure, epiphyllous, the minute, black, perforated, papilliform ostiola showing as black specks thickly scattered on the spots; sporules vermiform, 20—35 x 2 μ, 1—3-septate. *S. Helianthi*, E. & K., has larger, ferruginous spots without any raised border and much longer sporules acuminately attenuated at each end and 3—5-septate.

In the 23d Rep. N. Y. State Mus., pp. 54 and 55, the following *Septorias* are mentioned: *S. plantaginicola*, B. & C.; *S. Liriodendri*, B. & C.; *S. Vitis*, B. & C.; *S. destruens*, West.; *S. sanguinea*, Desm. Of these, the first is probably the same as *S. inconspicua*, B. & C.; the others may be considered doubtful.

Septoria viticola, B. & C., in Rav. F. Am., No. 26, should be *Sacidium viticolum*. See Grev. VI, p. 136.

NOTE.—In the preceding list, Nos. 159—188 have been added since Dr. Martin's death.

Prof. Saccardo having transferred a number of species heretofore described as *Septorias* to the genera *Phleospora*, *Rhabdospora* and *Phlyctæna*, they will be found under these heads.

PHLEOSPORA, Wall. Sylloge III, p. 577.

Perithecia innate, imperfect; sporules hyaline, elongated-fusoid, thick, 2-pluriseptate—growing on leaves. A name illy chosen to distinguish them from the *Septorias*, as the sporules are exuded or flow out in both.

1. PHLEOSPORA ACERIS (Lib.) Sacc. Sylloge III, p. 577; *Ascochyta Aceris*, Lib.; *Septoria acericola*, Desm.; *Septoria Aceris*, B. & Br.; Ellis, N. A. F., 346.

Spots tawny or pale yellow, subangular, limited by the veinlets, often coalescing, 3—5 millim. in diameter; perithecia brown, flattened, innate, hypophyllous, 150—200 μ in diameter; sporules hyaline, subfusiform, ends obtuse, 3-septate, not constricted, 20—30 x 3—5 μ. On leaves of *Acer* and *Negundo aceroides*. Massachusetts and California.

2. PHLEOSPORA CELTIDIS, E. & M.

Spots gray-brown, gray in the center, irregular, coalescing; perithecia dark brown, subglobose, prominent, few in a spot, amphigenous, 200—275 μ in diameter; sporules subhyaline, subfusiform, ends subacute, curved, 6—8-septate, 70—80 x 8—10 μ. On leaves of *Celtis occidentalis*. Missouri.

3. PHLEOSPORA MORI (Lev.), Sacc. Sylloge III, p. 577; *Septoria Mori*, Lev.; Rav. F. A., 506.

Spots light brown, subcircular, 1—2 millim. in diameter, border red-brown; perithecia (?) brown, innate, slightly prominent, hypophyllous —"mostly epiphyllous, Sacc."—50—60 μ in diameter; sporules hyaline, subfusiform, nearly straight, 3—4-septate, 40—50 x 4 μ. On leaves of *Morus rubra*. Pennsylvania to South Carolina. Perithecia very variable and sometimes entirely wanting.

4. PHLEOSPORA MORICOLA (Pass.), Sacc. Sylloge III, p. 578; *Septoria Mori*, Lev.

Spots indeterminate or brownish-gray, with a narrow, red-brown border; perithecia (?) small, scattered or loosely gregarious, innate slightly prominent, hypophyllous; sporules hyaline, subfusiform, multiseptate, on Pennsylvania specimen 5—7-septate, 60—70 x 4—5 μ. On leaves of *Morus alba*. Pennsylvania. Only distinguished from *P. Mori* by the multiseptate sporules.

5. PHLEOSPORA ULMI (Fr.), Wallr. Sylloge III, p. 578; *Septoria Ulmi*, Fr.

Spots light brown; perithecia (?) thin, scattered, innate, hypophyllous, brown, 120—140 μ in diameter; sporules hyaline, oblong-ovate, ends obtuse, 3—4-septate, 40—50 x 6 μ, exuded in white threads. On leaves of *Ulmus*. New York, Pennsylvania and Kentucky and westward to Missouri and Kansas.

6. PHLEOSPORA ANEMONES, E. & K. On leaves of *Anemone*. Kansas, July, 1896. (Kellerman.)

Leaf slightly yellowish and sprinkled with reddish-purple specks, indicating the position of the perithecia, which are distinctly prominent below, with a large opening through which issue in pale cirrhi the oblong-cylindrical, hyaline, nucleate, finally 3-septate sporules, which are 25—40 μ long and about three μ thick.

7. PHLEOSPORA ASIMINÆ, Ell. & Morgan. On leaves of *Asimina triloba*. Preston, Ohio. A. P. Morgan.

Leaves blotched above with dark brown; perithecia very rudimentary, minute, crowded in the brown spots in areas limited by the veinlets, opening below and discharging the oblong-fusoid, granular, nucleate and finally about 3-septate, slightly constricted, 20—40 x 12—15 μ sporules in the form of a white pruinosity on the surface of the leaf; basidia stout, 10—20 x 6—10 μ. The habit and general appearance is that of a *Cylindrosporium*.

8. PHLEOSPORA CARICIS, E. & E. On partly dead leaves of *Carex angustata*. Faulkland, Del., October, 1886. A. Commons, No. 466.

Perithecia on dull white, orbicular or, by confluence, subelongated spots 1—2 millim. in diameter, 3—10 in a spot, minute, black, slightly prominent; sporules oblong, 40—60 x 12—16 μ, becoming 4—6-septate. The spots appear on the green, living leaf and are surrounded by reddish rusty border and the leaf soon becomes dead and dry.

RHABDOSPORA, Mont. Sylloge III, p. 578.

Perithecia innate-erumpent, globose or depressed, brown or black, growing mostly without spots on branches or stems and not on leaves.

1. RHABDOSPORA ALLANTOIDEA (B. & C.), Sacc. Sylloge III, p. 586; *Septoria allantoidea*, B. & C., N. A. Fungi, No. 442.

"Spots pallid, elongated; sporules slightly sausage-shaped (oblong), 15—12 μ long." On stems of *Medicago sativa*. Pennsylvania.

2. RHABDOSPORA BREVIUSCULA (B. & C.), Sacc. Sylloge III, p. 590; *Septoria breviuscula*, B. & C., N. A. Fungi, No. 450 bis.

"Epidermis elevated by the perithecia; sporules sausage-shaped, twenty-five μ long." On branches of *Robinia*. South Carolina.

3. RHABDOSPORA CONTINUA (B. & C.), Sacc. Sylloge III, p. 593; *Septoria continua*, B. & C., N. of N. A. Fungi, p. 11, No. 444.

"Perithecia scattered, hidden by the epidermis, a little prominent; sporules filiform, nearly straight, basidia half the length of the sporules." On the scapes of *Plantago major*. Pennsylvania.

4. RHABDOSPORA DECIPIENS (B. & C.), Sacc. Sylloge III, p. 582; "*Septoria decipiens*, B. & C., N. A. Fungi, No. 445.

"Perithecia at last uncovered; sporules slender, long, flexuous." On whitened twigs of *Lonicera*. South Carolina.

5. RHABDOSPORA DIANÆ (B. & C.), Sacc. Sylloge III, p. 586; *Septoria Dianæ*, B. & C., N. A. Fungi, No. 445 bis.

"Perithecia flattened, large; sporules curved, long, nucleolate, acute." On branches of unknown tree. New England."

6. RHABDOSPORA FALX (B. & C.), Sacc. Sylloge III, p. 582; *Septoria Falx*, B. et C. Notice, N. A. Fungi, p. 76, No. 446 bis.

"Spots dull white or none; perithecia brown, black around the ostiola, globose, large, erumpent, densely gregarious, numerous; sporules hyaline, filiform, continuous, not guttulate, 18—20 x 2—2½ μ; basidia hyaline, straight, 12—16 x 2—2½ μ." On branches of *Vitis*. South Carolina.

7. RHABDOSPORA HEDEOMINA (Pk.), Sacc. Sylloge III, p. 590; *Septoria hedeomina*, Peck, 33d Rep. N. Y. S. M., p. 25.

"Spots none; perithecia black, flattened, scattered, inconspicuous, 120—140 μ in diameter; sporules hyaline, filiform, strongly curved, 30—40 μ long." On dead calyx stems of *Hedeoma pulegioides*. New York.

8. RHABDOSPORA HELIANTHICOLA (C. & H.), Sacc. Sylloge III, p. 592; *Septoria helianthicola*, C. & Hark., Grev. IX, p. 6.

"Perithecia black, semi-immersed, forming black spots; sporules linear, straight or flexuous, colorless, 30—35 x 1 μ." On stems of *Helianthus*. California.

9. RHABDOSPORA INTERRUPTA (B. et C.), Sacc. Sylloge III, p. 583; *Septoria interrupta*, B. et C., N. A. Fungi, No. 446.

"Perithecia scattered; sporules linear, flexuous, multinucleate, fifty μ long." On branches of *Viburnum Opulus*. Pennsylvania.

10. Rhabdospora Juglandis (Schw.), Sacc. Sylloge III, p. 584; *Septoria Juglandis*, B. et C., N. A. Fungi, p. 76.

"Perithecia black, innate, barely erumpent, gregarious; sporules rod-shaped, shortly curved above." On branches of *Juglans nigra*. Pennsylvania.

11. Rhabdospora Kellermani, E. & M.

Spots obsolete; perithecia black, innate, lenticular, scattered, 126—150 μ in diameter; sporules filiform, hyaline, nearly straight, 45 x 1½ μ. On stems and leaves of *Scrophularia nodosa* and *Mimulus ringens*. Ohio.

12. Rhabdospora Lonicerae (C. et Ell.), Sacc. Sylloge III, p. 582; *Cryptosporium Lonicera*, C. & E., Grev. VI, p. 83.

"Perithecia black, subgregarious, covered by the elongated, fissured epidermis; sporules hyaline, cylindrical, curved, obtuse, twenty-five μ long." On branches of *Lonicera*. New Jersey.

13. Rhabdospora maculans (B. et C.), Sacc. Sylloge III, p. 584; *Septoria maculans*, B. et C., N. A. Fungi, No. 448 bis.

"Spots pallid, minute, definite, border obscure; perithecia punctiform, gregarious; sporules slender, flexuous, twenty-five μ long." On slender twigs of *Alnus*. South Carolina.

14. Rhabdospora Pini (B. et C.), Sacc. Sylloge III, p. 585; *Cryptosporium Pini*, B. et C., N. A. Fungi, No. 396.

"Perithecia papilliform, black, covered by the cuticle, then erumpent; sporules slender, curved, 1-septate, ends attenuated, seventy μ long; basidia one third as long as the sporules." On smooth bark of *Pinus*. New England.

15. Rhabdospora ribicola (B. et C.), Sacc. Sylloge III, p. 579; *Septoria ribicola*, B. et C., N. A. Fungi, No. 444 bis.

"Perithecia black, scattered; sporules linear, curved, twenty-five μ long." On bleached branches of *Ribes rotundifolia*. Wisconsin.

16. Rhabdospora Rubi, Ell. n. sp.

Perithecia black, subglobose, innate, erumpent, scattered, 100—195 μ in diameter; sporules hyaline, linear, curved, 3—4-septate, 40—45 x 2 μ. On stems of *Rubus strigosus*. Illinois.

17. Rhabdospora Solidaginis (C. et E.), Sacc. Sylloge III, p. 591; *Cryptosporium Solidaginis*, C. et E., Grev. VI, p. 83.

"Perithecia brown, flattened, small, gregarious, innate, erumpent; sporules hyaline, fusiform, bowed or gently curved, acute, 30—35 μ long." On stems of *Solidago*. New Jersey.

18. Rhabdospora Trifolii (Ellis), Sacc. Sylloge III, p. 586; *Septoria Trifolii*, Ellis, Bul. Torr. Bot. Club IX, p. 74; Ellis, N. A. F., 746.

Perithecia covered but soon exposed by the peeling off of the epidermis, gregarious, forming little elongated patches or scattered evenly over the matrix; sporules fusiform, curved, granular, 20 x 4—5 μ. On dead stems of *Trifolium pratense*.

19. RHABDOSPORA VERRUCIFORMIS (B. et C.), Sacc. Sylloge III, p. 583; *Septoria verruciformis*, B. et C., N. A. F., No. 447.

"Perithecia large, wrinkled; sporules slender, nearly straight." On branches of *Cephalanthus*. Alabama.

20. RHABDOSPORA SUBGRISEA, Pk. 38th Rep. N. Y. State Mus., p. 98.

"Perithecia numerous, punctiform, depressed, black, covered by the epidermis, generally forming long, indefinite, grayish-brown spots; sporules filiform, straight or curved, 8—15 μ long. Dead stems and galls of various species of *Solidago*. Albany, N. Y., April and May."

PHLYCTÆNA, Mont. & Desm.

Perithecia subcutaneous, sometimes erumpent, globose-oblong, opening in a subhysterioid manner, imperfect; sporules fusoid-elongate or filiform, continuous, hyaline, borne on various basidia.

1. PHLYCTÆNA VAGABUNDA, Desm. Sacc. Syll. III, p. 594.

"Spots none or very minute, brown, fibrillose; pseudo-perithecia numerous, scattered; sporules hyaline, curved, elongated, linear, subobtuse, 7—9-guttulate, 18—25 μ long. On herbaceous stems of *Phytolacca*, etc."

2. PHLYCTÆNA SEPTORIOIDES, Sacc. *Septoria phlyctænoides*, B. & C., Grev. III, p. 10.

"Caulicolous; on white, elongated spots; perithecia hysteriiform; sporules filiform, curved above, hyaline, about twenty-five μ long. On stems of *Phytolacca*. Pennsylvania (Michener.)"

3. PHLYCTÆNA ORTHOSPORA, B. & C. Grev. II, p. 101.

"Pustules oblong with a dark margin, covered by the epidermis; sporules oblong, six μ long. On stems of *Phytolacca*." More properly a *Phoma*.

4. PHLYCTÆNA COMPLANATA (B. & C.) *Septoria complanata*, B. & C., Grev. III, p. 10.

"Caulicolous; perithecia rather large, somewhat flattened, hysteriiform; sporules very slender, nearly straight, very long. On stems of *Polygonum Virginicum*. Pennsylvania (Michener.)"

5. PHLYCTÆNA GOSSYPII, Sacc. Syll. III, p. 595.

"Perithecia globose, depressed, one half millim. in diameter, partially covered, texture parenchymatic, subfuscous; nucleus gray; sporules filiform, uncinate above, 25—30 x 1—1½ μ, hyaline, borne on rather short, bacillary basidia. On stems of cotton plant. South Carolina (Ravenel.)"

6. PHLYCTÆNA ARCUATA, Berk. Grev. II, p. 100.

"Pustules minute, subconvex, covered by the epidermis; sporules filiform, hooked at the apex, twenty-five μ long. On dead stem of *Solidago* and on *Rumex*."

7. PHLYCTÆNA SIMULANS (B. & C.) *Septoria simulans*, B. & C., Grev. III, p. 10.

"Caulicolous; on an elongated, pale spot; perithecia hysteriiform; sporules linear, curved, 25 μ long, elongated, curved at the apex, 20—25 μ long. On stems of *Nabalus*. New England."

8. PHLYCTÆNA SMILACIS, Cke. Texas Fungi, No. 141.

"Covered, minute, brown, densely gregarious, slightly elevated; sporules filiform, elongated, curved at the apex, 20—25 μ long." On stems of *Smilax*. Texas.

10. RHABDOSPORA JUGLANDIS (Schw.), Sacc. Sylloge III, p. 584; *Septoria Juglandis*, B. et C., N. A. Fungi, p. 76.

"Perithecia black, innate, barely erumpent, gregarious; sporules rod-shaped, shortly curved above." On branches of *Juglans nigra*. Pennsylvania.

11. RHABDOSPORA KELLERMANI, E. & M.

Spots obsolete; perithecia black, innate, lenticular, scattered, 128—150 μ in diameter; sporules filiform, hyaline, nearly straight, 45 x 1½ μ. On stems and leaves of *Scrophularia nodosa* and *Mimulus ringens*. Ohio.

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Perithecia black, subglobose, innate, erumpent, scattered, 100—195 μ in diameter; sporules hyaline, linear, curved, 3—4-septate, 40—45 x 2 μ. On stems of *Rubus strigosus*. Illinois.

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Index to the Species of Septoria.

Septoria acerella *160
Septoria acerina 1
Septoria acicola 2
Septoria aciculosa..... 3
Septoria Aegopodii.....187
Septoria albaniensis 4
Septoria alnicola 166
Septoria albo-nigra 5
Septoria albo-punctata 6
Septoria Alismatis 7
Septoria ampelina..... 8
Septoria angustata..... 9
Septoria Aquilegiæ..... 10
Septoria argophylla..... ..183
Septoria Astragali..... 11
Septoria astragalicola..... ... 12
Septoria atropurpurea..... 13
Septoria bacilligera..... 14
Septoria Baptisiæ..... 15
Septoria Besseyi..... 16
Septoria betulicola..... 17
Septoria Bidentis..... 18
Septoria Brunellæ..... 19
Septoria Cacaliæ 20
Septoria Calystegiæ.....171
Septoria Campanulæ..... 21
Septoria Cannabis..... 22
Septoria caricinella 161
Septoria Caryæ 164
Septoria Celti-gallæ 23
Septoria Cephalanthi 24
Septoria Cerastii 25
Septoria cerasina..... 26
Septoria ceuthosporoides..... 27
Septoria Chimaphilæ.....181
Septoria Chionanthi..... 28
Septoria cirrhosa..... .. 29
Septoria Cirsii..... 30
Septoria cocoina..... 180
Septoria consimilis..... 31
Septoria consocia 32
Septoria conspicua 78
Septoria Coptidis..... 33
Septoria cornicola..... 34
Septoria corylina 35
Septoria Cryptotæniæ 36
Septoria Cucurbitacearum 37
Septoria Curtisiana 38
Septoria Dalibardæ 39
Septoria Dentariæ..... 40
Septoria Diervillæ 41
Septoria difformis... 42
Septoria Dolichi 43
Septoria dryina..... 44
Septoria imaculata..... 45
Septoria Epilobii 176
Septoria Equiseti..... 46
Septoria Erigerontis 47
Septoria Eupatorii 179
Septoria examinans..... 48
Septoria expansa.....182
Septoria flagellaris... 49
Septoria Fraxini.... 50
Septoria fructigena 51
Septoria fumosa..... 174
Septoria Galiopsidis 168
Septoria Gei.... 175
Septoria Galiorum 52
Septoria gaurina..... 53
Septoria Gerardii 54
Septoria glauca..... 172
Septoria gossypina... 55
Septoria graminum 56
Septoria Gratiolæ 57
Septoria Helenii.....188
Septoria Helianthi 58
Septoria Hosackiæ 59
Septoria Hydrocotyles..... 60
Septoria ilicifolia..... 61
Septoria inconspicua 62
Septoria increscens 63
Septoria infuscata 64
Septoria irregularis..... 65
Septoria kalmiæcola..... 66
Septoria Kellermaniana 67
Septoria Lactucæ 68
Septoria lactucicola..... 69
Septoria Lamii 70
Septoria Lapparum 177
Septoria lepidiicola 71
Septoria Leptostachya 72
Septoria Liquidambaris..... 73
Septoria littorea..... 185
Septoria Lobeliæ 74
Septoria Lophanthi 75
Septoria Ludwigiæ 76
Septoria Lupini 77
Septoria lythrina..... 79
Septoria maculosa..... 54
Septoria Magnoliæ 80
Septoria malvicola 81
Septoria Melandrii 159
Septoria melanopthalmi 82
Septoria Mentzeliæ..... 83
Septoria microsperma 84
Septoria Mimuli..... 85
Septoria mirabilis..... 86
Septoria musiva..... 170
Septoria Nabali 87
Septoria narvisiana... 88
Septoria niphostoma..... 89
Septoria noctifloræ..... 90
Septoria Noli-tangeris 91
Septoria ochroleuca..... 92
Septoria Oenotheræ..... 93
Septoria oleandrina..... 94
Septoria Ostryæ 95
Septoria pachyspora..... 96
Septoria pastinacina..... 97
Septoria paupera 98
Septoria Peckii 99
Septoria Pentstemonis.....100
Septoria Phlogis.....178
Septoria Photiniæ 101
Septoria Pliesæ 102
Septoria plantaginea 165
Septoria platanifolia ... .103
Septoria podophyllina..... 104
Septoria polemoniicola 162
Septoria Polygalæ.....105
Septoria Polygonorum.... 106
Septoria Pruni..... 107
Septoria psilostega.....108
Septoria pulchella 109
Septoria punicei 173
Septoria purpurascens..... 110
Septoria pyricola..... 167
Septoria Pyrolæ 111

* The figures refer to the number of the description.

Septoria Querceti 112
Septoria Ravenelii 113
Septoria recta 114
Septoria Rhododendri 115
Septoria rhoina 116
Septoria Ribis 117
Septoria Rubi 118
Septoria Rubi var. pallida 119
Septoria Salliæ 120
septoria salicifolia 121
Septoria salicina 122
Septoria sambucina 123
Septoria Scleranthi 124
Septoria Scrophulariæ 125
Septoria serpentaria 126
Septoria Sicyi 169
Septoria Sii 186
Septoria silenicola 127
Septoria Silphii 184
Septoria Sisymbrii 129
Septoria Smilacini 130
Septoria Solidaginis 131
Septoria sonchifolia 132
Septoria specularina 133
Septoria Specularis 134
Septoria spiculosa 135
Septoria sphæreliodes 136
Septoria Stenosiphonis 137
Septoria stigma 138
Septoria submaculata 139
Septoria Symphoricarpi 140
Septoria Symploci 141
Septoria tenella 142
Septoria tenuissima 143
Septoria Toxicodendri 144
Septoria Trillii 145
Septoria Tritici 96
Septoria unicolor 146
Septoria Urticæ 168
Septoria Verbenæ 147
Septoria verbascicola 148
Septoria vestita 149
Septoria Violæ 150
Septoria viridi-tingens 151
Septoria Virgaureæ 152
Septoria Waldsteiniæ 153
Septoria Wilsoni 154
Septoria Wyethiæ 155
Septoria Xanthii 156
Septoria xanthifolia 157

Index to Species of Phleospora.

Phleospora Aceris 1
Phleospora Anemones 6
Phleospora Asiminæ 7
Phleospora Caricis 8
Phleospora Celtidis 2
Phleospora Mori 3
Phleospora moricola 4
Phleospora Ulmi 5

Index to Species of Rhabdospora.

Rhabdospora allantoidea 1
Rhabdospora breviuscula 2
Rhabdospora continua 3
Rhabdospora decipiens 4
Rhabdospora Dianæ 5
Rhabdospora Falx 6
Rhabdospora hedeomina 7
Rhabdospora helianthicola 8
Rhabdospora interrupta 9
Rhabdospora Juglandis 10
Rhabdospora Kellermani 11
Rhabdospora Loniceræ 12
Rhabdospora maculans 13
Rhabdospora Pini 14
Rhabdospora ribicola 15
Rhabdospora Rubi 16
Rhabdospora Solidaginis 17
Rhabdospora subgrisea 20
Rhabdospora Trifolii 18
Rhabdospora verruciformis 19

Index to Species of Phlyctaena.

Phlyctæna vagabunda 1
Phlyctæna septorioides 2
Phlyctæna orthospora 3
Phlyctæna complanata 4
Phlyctæna Gossypii 5
Phlyctæna arcuata 6
Phlyctæna simulans 7
Phlyctæna Smilacis 8

Alphabetical List of Host Plants.

[Phleospora, Rhabdospora and Phlyctæna are indicated by P., R. and Ph. attached to the numbers.]

Acer Pennsylvanicum 1
Acer saccharinum 120
Allium tricornum 151
Alisma Plantago 7
Alnus ..... 13, R, 166
Ambrosia trifida 14
Andromeda ferruginea 109
Aquilegia vulgaris 10
Anemone ..... 6, P
Asimina ..... 7, P
Astragalus 12
Aster cordifolia 13
Aster macrophylla 13
Aster puniceus 173
Bæhmeria cylindrica 143
Baptisia 15
Betula 17
Betula lenta 84
Bidens bipinnata 18
Brunella vulgaris 19
Cacalia tuberosa 20
Calystegia sepium 171, 49
Campanula Americana 21
Cannabis sativa 22
Carex ..... 161, 8, P
Castanea vesca 23
Celtis occidentalis ..... 2, P, 23
Cephalanthus occidentalis ..... 19, R, 24
Cerastum viscosum 25
Chelone glabra 154
Chimaphila maculata 181
Chionanthus Virginica 26
Cirsium altissimum 30
Cocos plumosa 180

Coptis 33
Cornus 34
Corylus rostrata 35
Cryptotænia Canadensis 36
Cucurbita 149, 37
Cuphea viscosissima 54
Dalbarda repens 39
Dentaria diphylla 40
Diervilla trifida 41
Dolichos 43
Dolichos melanophthalmus 82
Epilobium coloratum 176
Erigeron 47
Equisetum 46
Eucalyptus 27
Festuca tenella 142
Fragaria 3
Fraxinus 50, 16
Fraxinus Americana 139
Galeopsis tetrahit 168
Galium 52
Galium pilosum 106
Gaura parviflora 53
Geranium Carolinianum 182
Geum Virginianum 175
Gossypium ..... 5, Ph, 55
Gratiola quadridentata 57
Hedeoma pulegioides ..... 7, R
Helianthus ..... 8, R
Helianthus divaricatus 96
Helianthus doronicoides 58
Hosackia strigosa 59
Hydrocotyle repanda 60
Hypericum corymbosum 136
Ilex 61, 48
Impatiens 91
Iva xanthifolia 157
Juglans nigra ..... 10, R
Kalmia latifolia 66
Lactuca sativa 68, 31
Lactuca Canadensis 69
Laportea Canadensis 163
Lappa 177
Lathyrus maritimus 11
Lathyrus ochroleucus 11
Lathyrus palustris 45
Leonurus Marrubiastrum 70
Lepidium Virginicum 71
Lepachys pinnata 64
Liquidamber styraciflua 73
Lobelia spicata 74
Lobelia syphilitica 74
Lonicera ..... 12, R, 4, R
Lopanthus nepetoides 75
Ludwigia palustris 76
Lupinus densiflorus 77
Lychnis 159
Lysimachia ciliata 78
Lythrum alatum 79
Lythrum Salicaria 79
Magnolia grandiflora 89, 80
Malva rotundifolia 81
Medicago sativa ..... 1, R
Mentzelia nuda 83
Mimulus ringens ..... 11, R, 85
Morus alba ..... 4, P
Morus rubra ..... 3, P
Mulgedium acuminatus 146
Nabalus alba ..... 7, Ph, 87
Negundo aceroides ..... 160, 1, P
Nerium Oleander 94
Oenothera biennis 93
Onoclea sensibilis 86
Ostrya Virginica 95
Panicum sanguinale 56
Passiflora 51
Pastinaca sativa 97
Pentstemon Digitalis 100
Phlox divaricata 178
Photinia 101
Phryma Leptostachya 72
Phytolacca ..... 1, 2, 3, Ph
Pilea pumila 103
Pinus ..... 14, R
Pinus mitis 2
Platanus occidentalis 108
Plantago lanceolata 62
Plantago major ..... 8, R
Podophyllum peltatum 104
Polemonium 162
Polygala paucifiora 105
Polygala senega 32
Polygonum Pennsylvanicum ..... 4, Ph, 106
Populus 170
Potentilla Norvegica 110
Prunus Americana 107
Prunus Caroliniana 113
Prunus serotina 118, 26
Psoralea argophylla 183
Pyrola secunda 111
Pyrus 167
Quercus falcata 44
Quercus laurifolia 126
Quercus tinctoria 112
Rhododendron 115
Rhus Cotinus 116
Rhus Toxicodendron 144, 65
Ribes 117
Ribes rotundifolia ..... 15, R
Robinia ..... 2, R
Rubus 118
Rubus hispidus 119
Rubus strigosus ..... 16, R
Rumex ..... 6, Ph
Salix lucida 122, 4
Sambucus Canadensis 123
Scirpus fluviatilis 99
Scirpus maritima 88
Scleranthus annuus 124
Scrophularia nodosa ..... 11, R, 125
Silenes noctiflora 90
Silenes stellata 127
Silphium perfoliatum 184
Sisymbrium 129
Smilacina 130
Smilax ..... 8, Ph
Solidago ..... 6, Ph, 20, R, 19, R, 152
Solidago Canadensis 174
Solidago odora 131
Solidago puberula 131
Sonchus asperis 132
Specularia 133
Specularia perfoliata 134
Spirea salicifolia 121
Staphylea trifolia 29
Stenosiphon virgatus 137
Sicyos 169
Symplocus tinctoria 141, 138
Symphoricarpus 140
Symplocarpus fœtidus 135
Trientalis Americana 63
Trifolium pratense ..... 18, R
Trillium recurvatum 145
Triticum 38
Typha 9
Ulmus ..... 5, P
Vaccinium arboreum 6
Vaccinium Pennsylvanicum 42
Verbena angustifolia 147
Verbena hastata 147
Verbascum Blattaria 148
Viburnum Opulus ..... 9, R
Viola lanceolata 150
Vitis vulpina 8
Vitis riparia 67
Vitis ..... 6, R
Waldsteinia fragarioides 153
Wyethia mollis 155
Xanthium strumarium 156
Yucca gloriosa 158
Zanthoxylum Americanum 96
Unknown ..... 5, R, 114, 5

OBITUARY.

Dr. Ezra Michener died at his residence in Toughkenamon, Chester Co., Pa., June 25, 1887, in the 93d year of his age. He was born in London Grove township, in Chester Co., Nov. 24, 1794. In 1818 he received his medical diploma and began the practice of medicine in his native village. Some ten years later, he removed to Toughkenamon, where he ever afterwards continued to reside. For sixty years, he was the trusted family physician of many of the residents of his section; but among scientific men, he will be chiefly remembered on account of his mycological work in collecting and giving to science, through the publications of Berkeley & Curtis, many new and rare fungi from his locality. E.

NEW LITERATURE.

BY W. A. KELLERMAN.

"REVISIO MONOGRAPHICA GENERIS GEASTERIS MICH., E TRIBU GASTEROMYCETUM." Auctore Doct. G. B. DeToni (Suite et fin.) Revue Mycologuique, 1er Juillet, 1887.

"THE GROWTH OF TULOSTOMA MAMMOSUM." Chas. E. Bessey. American Naturalist. July, 1887.

"FUNGI SELECTI EXSICCATI PRÆCIPUE GALLIÆ ET ALGERIÆ." Centurie XLIIe. C. Roumeguere.

"LES HYMENOMYCETES D'EUROPE: ANOTOMIE GENERALE ET CLASSIFICATION DES CHAMPIGNONS SUPERIEURS." N. Patouillard. Paris. Librarie Paul Klincksieck, 1887.

This valuable work, which is Vol. I of Materiaux pour L'Historie des Champignons, embraces general anatomy, pp. 1-69, classification, pp. 70-166, and four plates, with numerous figures, illustrating the anatomy of the several species.

"SYLLOGE FUNGORUM OMNIUM HUCUSQUE COGNITORUM," digessit P. A. Saccardo, Padua, May 28, 1887.

The 5th volume of this work is now issued. It is a thick royal octavo volume of 1,144 pages and is devoted to the *Agaricini*, of which 4,639 species are enumerated with the original descriptions. The systematic arrangement is the same as that given by Fries in his Epicrisis, except that the subgenera *Amanita*, *Tricholoma*, *Lepiota*, etc., are given generic rank.

The rest of the *Hymenomycetes* will be included in Vol. VI (which will be about half the size of Vol. V) and is expected to be ready early in 1888 and will contain an index of all the species of *Hymenomycetes*, Vol. V having only an index of the genera.

Vol. VII, on which the work is already nearly finished, is expected to appear at the end of the current year and will contain the *Phalloids*, *Nidulariaceæ*, *Lycoperdons*, *Hymenogasters*, *Mucorini*, *Peronosporeæ*, *Saprolegneæ*, *Entomophthoreæ*, *Chytridiaceæ*, *Protomyceteæ* and *Myxomycetes*.

The VIII and last volume, containing the *Discomycetes*, *Tuberaceae*, *Elaphomyceteae*, *Saccharomyceteae*, *Estilagineae* and *Uredineae* is promised early in 1889. E.

TABLE OF CONTENTS.

PAGE.

ENUMERATION AND DESCRIPTION OF THE SEPTORIAS OF NORTH AMERICA - - - - - - - - - - - - - 84
INDEX TO SPECIES OF SEPTORIA - - - - - - - - - 92
INDEX TO SPECIES OF PHLEOSPORA - - - - - - - - - 93
INDEX TO SPECIES OF RHABDOSPORA - - - - - - - - 93
INDEX TO SPECIES OF PHLYCTÆNA - - - - - - - - 93
INDEX TO SPECIES OF HOST PLANTS - - - - - - - - 93
OBITUARY—DR. EZRA MICHENER - - - - - - - - - 95
NEW LITERATURE - - - - - - - - - - - - - 95

Index to Described Species.

PAGE.

Ascochyta Aceris, Lib.....87
Cryptosporium Loniceræ, C. & E.....90
Cryptosporium Pini, B. & C.....90
Phleospora, Wall.....87
Phleospora Aceris (Lib.) Sacc 87
Phleospora Anemones, E. & K.....87
Phleospora Asiminæ, Ell. & Morg....88
Phleospora Caricis, E. & E.....88
Phleospora Celtidis, E. & M.....87
Phleospora Mori (Lev.) Sacc.....88
Phleospora moricola (Pass.) Sacc.....88
Phleospora Ulmi (Fr.) Wallr.....88
Phlyctæna, Mont. & Desm.....91
Phlyctæna arcuata, Berk 91
Phlyctæna complanata (B. & C.).....91
Phlyctæna Gossypii, Sacc.....91
Phlyctæna orthospora, B. & C.....91
Phlyctæna septorioides, Sacc.....91
Phlyctæna simulans (B. & C.).....91
Phlyctæna Smilacis, Cke.....91
Phlyctæna vagabunda, Desm.....91
Rhabdospora, Mont.....89
Phabdospora allantoidea (B. & C.)....89
Phabdospora breviuscula (B. & C.)...89
Rhabdospora continua (B. & C.) 89
Rhabdospora decipiens (B. & C.).....89
Rhabdospora Dianæ (B. & C.).....89
Rhabdospora Falx (B. & C.).....89
Rhabdospora hedeomina (Pk.).....89
Rhabdospora helianthicola (C. & H.)..89
Rhabdospora interrupta (B. & C.).....89
Rhabdospora Juglandis (Schw.) 90
Rhabdospora Kellermani, E. & M.....90
Rhabdospora Loniceræ (C. & Ell.)....90
Rhabdospora maculans (B. & C.).....90
Rhabdospora Pini (B. & C.).....90
Rhabdospora ribicola (B. & C.).....90
Rhabdospora Rubi, Ell.....90

PAGE.

Rhabdospora Solidaginis (C. & E.)....90
Rhabdospora subgrisea, Pk.....91
Rhabdospora Trifolii (Ellis).....90
Rhabdospora verruciformis (B. & C.).91
Septoria Aegopodii, Desm.....86
Septoria acericola, Desm.....87
Septoria Aceris, B. & Br 87
Septoria allantoidea, B. & C 89
Septoria argophylla E. & K.....86
Septoria breviuscula, B. & C.....89
Septoria Chimaphilæ, E. & E.....85
Septoria cocoina, E. & E.....85
Septoria complanata, B. & C 91
Septoria continua, B. & C.....89
Septoria decipiens, B. & C.....89
Septoria Dianæ, B. & C.....89
Septoria Eupatoria, Rob. & Desm... 85
Septoria expansa, Niessl.....89
Septoria Falx, B. & C.....89
Septoria hedeomina, Pk.....89
Septoria Helenii, E. & E.....89
Septoria helianthicola, C. & Hark.....89
Septoria interrupta, B. & C.....89
Septoria Juglandis, B. & C.....90
Septoria littorea, Sacc.....86
Septoria maculans, B. & C.....90
Septoria Mori, Lev.....88
Septoria Phlogis, E. & E.....85
Septoria phlyctænoides, B. & C.....91
Septoria ribicola, B. & C.....90
Septoria Sii, Rob. & Desm.....86
Septoria Silphii, E. & E.....86
Septoria simulans, B. & C.....91
Septoria Solidaginis, C. & E.....90
Septoria Trifolii, Ellis.....90
Septoria Ulmi, Fr.....88
Septoria verruciformis, B. & C.....91